SIEMENS

LITHOSTAR Multiline

SP

Installation and setting instructions

Installing the Ultrasound Localizer

English

Document revision level

The document corresponds to the version/revision level effective at the time of system delivery. Revisions to hardcopy documentation are not automatically distributed.

Please contact your local Siemens office to order current revision levels.

Disclaimer

The installation and service of equipment described herein is to be performed by qualified personnel who are employed by Siemens or one of its affiliates or who are otherwise authorized by Siemens or one of its affiliates to provide such services.

Assemblers and other persons who are not employed by or otherwise directly affiliated with or authorized by Siemens or one of its affiliates are directed to contact one of the local offices of Siemens or one of its affiliates before attempting installation or service procedures.

General

Safety note

NOTICE	**When performing service work and tests, observe the product-specific safety information contained in the system documentation as well as the safety information contained in Register 2 of the TI folder.**

Checks and adjustments which must be performed with radiation switched on are identified with the radiation symbol ⚠. Radiation protection must be worn during these types of adjustments.

Protective conductor test

Perform the protective conductor test according to TI 236 / ARTD - 002.731.17... after completing all service work and reattaching all covers. The protective conductor resistance must not exceed 0.2 ohms.

Tools required

- Standard installation tools
- Power drill
- Jigsaw with saw blade for wood

Documents required

- Adjustment of software parameters...   RXL2-120.032....

NOTICE	**The option is functional only if the system is upgraded with software Update (UI SP 013 / 01).**

Installing the Ultrasound Localizer 3

Supplied documentation

- Repair instructions ultrasound localizer   RXL2-120.091....
- Supplement for operating instructions

NOTE	Revision 06 is installed in systems < 07136 (UI SP 013 / 01).

Fig. 1

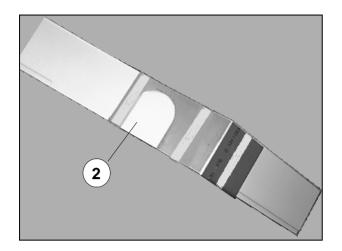| NOTICE	**Observe ESD regulations to avoid damage.**

Unpacking / assembling the ultrasound system

- The SONOLINE Prima does not require any special installation instructions. All you need to do is unpack the unit as described in the "unpacking procedure" affixed to the outside of the unit and attah the accessories.

Mechanical modifications on LITHOSTAR Multiline

Preparation

- Turn the system **On.**
- Move the Multiline to position "0".
- Move the W drive to the gel position.
- Raise the table top to the upper end position.
- Move the unit all the way back to the end position (in X direction).
- Remove the right side panel from the unit.
- Remove the inner right hand cover from the coupling system (1/Fig. 1).
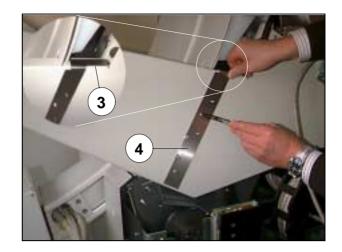- Disconnect the internal probe plug X20.

Fig. 2

Fig. 3

Mounting the probe holder

- Place the template on the right side cover as shown in figure 2 and secure it with adhesive tape.

- Attach a blade suitable for wood to the jigsaw and cut out the section marked (2/Fig. 2).

- Deburr the cutting line.

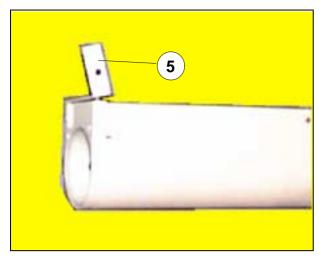| Systems with serial no. < 06045	Systems with serial no. 06045
• Hold the mounting panel to the right support (Fig. 3) and mark the mounting holes. Watch for the correct placement of the angle piece (3/Fig. 3).	• Move the unit to the starting position; release the button when the system stops in the X direction.
• Cover the drilling area to prevent drill chips from falling into the unit.	• Hold the mounting panel to the support on the right (Fig. 3). Be sure to correctly place the angle piece (3/Fig. 3).
• Drill a 6 mm holes.	• Attach the mounting panel (4/Fig. 3) with 2 screws M4 x 12, and 2 washers.
• Remove any drill chips.	
• Move the unit to the starting position ; release the button when the system stops in X direction.	
• Attach the mounting panel (4/Fig. 3) with 2 screws M4 x 12,2 washers, and 2 lock nuts.	

Tab. 1
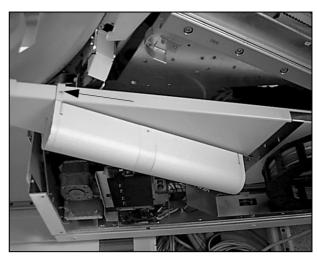
⚠CAUTION	When moving the W drive back, be careful not to damage the cables.

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Fig. 4

Fig. 5

Fig. 6

Fig. 7
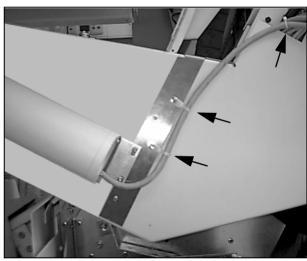
Systems with serial no. < 06045	Systems with serial no. 06045
• Place the probe holder on the lateral support and mark the upper mounting hole (Fig. 5).	• Remove the plastic plug from the front mounting hole of the probe holder (Fig. 5).
• Cover the drilling side to prevent drill chips from falling into the unit.	• Install the probe cable inside the probe holder (Fig. 6).
• Drill a ∅ 6 mm hole.	• Place any excessive cable length inside the holder.
• Remove any drill chips.	• Mount the probe holder.

Tab. 2

Systems with serial no. < 06045	Systems with serial no. 06045

• Install the probe cable inside the probe holder (Fig. 6).
 	
• Place any excessive cable length inside the holder.
 	
• Attach the probe holder
  - front: panel screw and threaded plate.
  - back: contact washer and lock nut.
	• Attach the probe holder
	  - front: panel screw.
	  - back: contact washer and lock nut.

Tab. 2

• Move the shockwave head to the gel position.

⚠ CAUTION	Avoid damaging the cables when moving the W drive forward.

• When moving the W drive out, check that the probe holder does not contact board D7. If yes, reposition the probe holder so that it clears board D7.

• Raise the table top to its highest position.

• Move the unit back to the end position (X direction).

• Reattach the inner right-hand cover to the coupling system (1/Fig. 1).

• Reattach the right side panel.

• Screw the cable ties to the support bracket (Fig. 7) using washers and lock nuts.

• Use cable ties to secure the cable (Fig. 7).
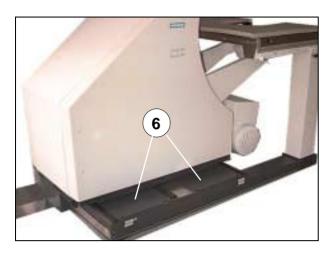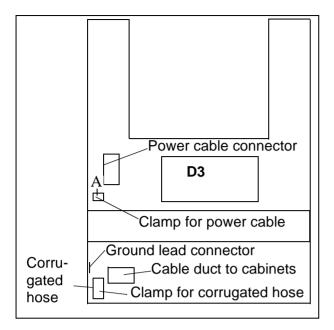
Attaching the corrugated hose to the unit

Fig. 8

- Select urology mode or insert the uro-panel.
- Remove both covers from the base plate (6/Fig. 8).
- Turn the unit on and move the system in the Y direction to the left until D31 is accessible.
- Open the cable entry hole at the right rear portion of the base frame.
- Attach the support plate for the corrugated hose with screws underneath the opening.
- Feed the Sonoline corrugated hose through the opening and secure it with the hose clamp to the support plate.

Cable type	Function	Ultrasound device	Multiline		OK
			Unit	Cabinet A12	
1 x 4 mm2	Protective conductor	Back panel	Protective conductor terminal		
3 x 0.75 mm2 shielded	Power supply	Back panel	refer to text below		
Canon, 9 pole	Control cable	VBF US	D31.X28		
Fiber optic cable	Communication	Back panel			
Video		No function			

- Connect the Sonoline protective conductor to the stud on the cable holder (Fig. 9).
- Attach the screw mount for the power cable:
  - Loosen the screw (A/Fig. 9) and then retighten the clamp.
- Connect the SONOLINE power supply cable:
  - **for 220 V:**   - Connect the wires to the line voltage terminal NK 1, 2, 3 (Fig. 9) For shielding, refer to (A/Fig. 9).
  - **for 115 V:** (The parts are included in the bag for Power supply 115 V)
    - Attach the adapter plug (female part) und cable conduit supplied to the 115 V power supply cable routed in the base plate on-site.
    - Cut off the Faston connector of the line voltage cable protruding from the corrugated hose. Replace the Faston connector with the the pin-shaped (male) connector and the cable conduit.
    - Connect both adapter plugs together (from the corrugated hose - from the power supply)
- Route the video cable and the fiber optic cable to the control cabinet.
- Remove the EMC cover from N11 in front of boards D7 d/c, if existing.
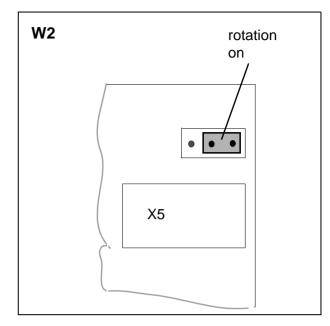
Fig. 9

Fig. 10

- Install the additional board D7 in the control frame. Position D7 E (motor output stage for cone rotation).

- Remount the EMC cover.

- Remove the lower shockwave head cover.

- Remove the jumper from switch S42 (cone drive), if existing, or remove jumper X42 on board W2 in the cone drive (Fig. 10).

- Reattach the cover.

- Connect the fiber optic cable to board D6 (observe the color code).

- Attach the adhesive clamps to positions 22 and 6 on the right side of the control cabinet.

- Secure thefiber optic cable to the adhesive clamps.

- Connect the plug from the table-side operating panel to the ultrasound system.

- Insert the inline probe in the storage compartment and connect it.

- Connect the corrugated tubing to the SONOLINE, if required.
  If the corrugated tubing has a plug, a wall support bracket is required.

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System start-up

- Turn the unit **On.**

- Connect the service PC.

- Change the following parameters:

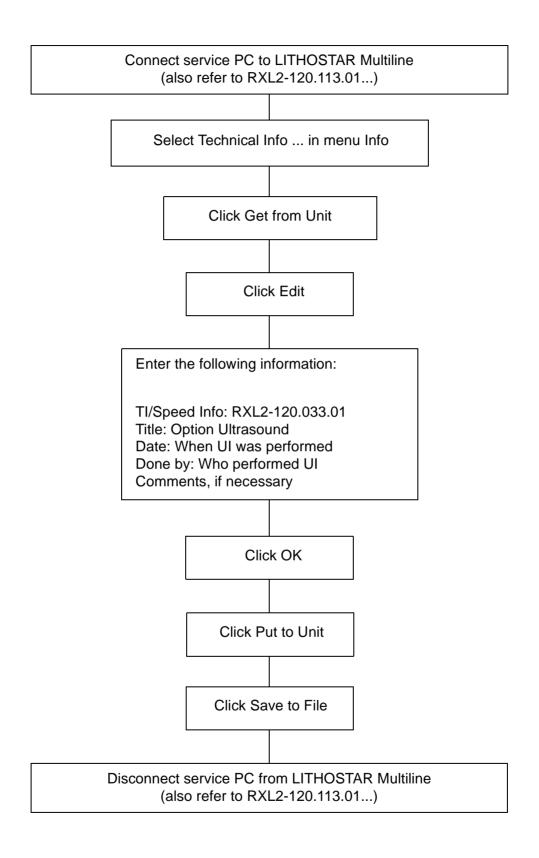| Parameter Groups	Parameters	Changes
User terminal:	User terminal ultrasound	Change the value from 00 to FF
Interface ultrasound:	System available	Change the value from 00 to FF
	Line frequency	Depending on line frequency: 00 = 50 Hz, 01 = 60 Hz
	Target	136
Configuration: Motor device	MC1 am9 cone rotation	Change to 09

(also refer to instructions "Adjusting Software Parameters RXL2-120.032....")

- Make a backup copy of the parameter file.

- If switch S42 (safety switch for cone rotation) is activated, error 0011 will be displayed on the host board D1.
  If this happends, bypass S42 or insert jumper X42 on board W2 in the cone drive and rotate the cone with the NBF US to "0°" (Fig. 9). When doing this, the probe must be located in the cone drive.

- Perform a function check for the ultrasound system according to the instructions "Installation SONOLINE Prima U3.LH300.031....".

- Check the isocenter (see instructions RXL2-120.91. ...).

- Check the shock wave release.

- Also check ECG and respiration trigger functions, where existing. Enter the required information in the "Technical Info" menu on the service PC (see page 13).

- Fill in the update completion form (refer to page 11) and send a copy to Erlangen.

- To set the date, time and name of the clinic, refer to the SONOLINE Adara Operating Instructions, Chapiter 4 System setup "General system settings".

- Complete the operating instructions for the LITHOSTAR Multiline.

- File the technical documents supplied in the system binder.

- Perform the protective conductor test.

Completion Protocol

The ultrasound localizer option has been installed.

Part Number:	31 27 011	Model No:	LITHOSTAR Multiline
Serial Number:	....	SKZ:	....
Customer:	....	Site:	....
Customer No.:	....		
Name (CSE):	....	Telephone:	....
Country:	....	Location:	....
Date:	....	Signature:	....
Remark:	....		
	....		

NOTE	After completing the update, make a copy of this page, fill it out and file it in Register 10 of the System Manual at the corresponding site.

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Connect service PC to LITHOSTAR Multiline
(also refer to RXL2-120.113.01...)

Select Technical Info ... in menu Info

Click Get from Unit

Click Edit

Enter the following information:

TI/Speed Info: RXL2-120.033.01
Title: Option Ultrasound
Date: When UI was performed
Done by: Who performed UI
Comments, if necessary

Click OK

Click Put to Unit

Click Save to File

Disconnect service PC from LITHOSTAR Multiline
(also refer to RXL2-120.113.01...)

Changes as compared to previous version

Page 1   Cover page newly generated and revision level increased

Page 2   Paragraph 'Notice' - text changed

Page 3   Paragraph 'Supplied documentation' - one line deleted
                   Paragraph 'Requirements' deleted - notice inserted

Page 4   Paragraph 'Unpacking / assembling the ultrasound system' - new
                   paragraph inserted

Page 10   Paragraph 'System start' - sentence inserted

Page 11   Old page deleted and new page inserted

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